REMARKS

The Examiner is thanked for the performance of a thorough search and for considering the references included in the Information Disclosure Statements (IDS) filed on April 25, 2008.

Claims 1, 12, 22, and 30 have been amended. No claims have been added or canceled. Hence, Claims 1-10 and 12-39 are pending in the present application.

Each issue raised in the final Office Action mailed June 2, 2008 is addressed hereinafter.

I. ISSUES RELATING TO THE CITED ART

A. INDEPENDENT CLAIM 1

Claim 1 was rejected as allegedly unpatentable under 35 U.S.C. § 103(a) over Lund et al., U.S. Patent Application Publication No. US 2003/0078999 ("LUND") in view of Arndt, U.S. Patent No 6,826,611 ("ARNDT") and further in view of Gerba et al., U.S. Patent Application Publication No. US 2002/0040389 ("GERBA"). The rejection is respectfully traversed.

Among other features, Claim 1 comprises:

> …;
> **the first device requesting a list of identifiers** corresponding to virtual circuits **from a configuration interface for the virtual circuit network**;
> … ;
> iteratively applying each identifier to individual instances of interface configuration commands until connectivity with a remote device is established, comprising the steps of:
> **requesting, from a second device terminating the virtual circuit** corresponding to an identifier selected from the list, **an IP address of the second device**;
> **wherein the second device terminating the virtual circuit is operable to provide connectivity to the remote device**;
> wherein **the second device terminating the virtual circuit is operable to route messages that are destined to the remote device**, and wherein the **remote device is operable to provide configuration information to configure the first device**;
> … .

Thus, Claim 1 comprises the features of: a first device (the device being provisioned) requesting a list of virtual circuit identifiers from a configuration interface for the virtual circuit network; and requesting, from a second device terminating the virtual circuit, an IP address of the second

device. Further, the second device terminating the virtual circuit is operable to provide connectivity and to route messages destined to the remote device, and the remote device is operable to provide configuration information to configure the first device. These features are not described or suggested by the cited references.

1. LUND, ARNDT, and GERBA do not describe or suggest the features of Claim 1 of: wherein the second device terminating the virtual circuit is operable to provide connectivity to the remote device; and wherein the second device terminating the virtual circuit is operable to route messages that are destined to the remote device, and wherein the remote device is operable to provide configuration information to configure the first device.

In rejecting Claim 1, the final Office Action does not provide a citation to any passages in any of LUND, ARNDT, or GERBA that allegedly show prior disclosure of the feature of Claim 1 of: **wherein the second device terminating the virtual circuit is operable to provide connectivity to the remote device**. Moreover, the Applicants have considered LUND, ARNDT, and GERBA in their entirety and have not identified anything that corresponds to a second device that terminates a virtual circuit and that is operable to provide connectivity to a remote device, to which remote device a first device that communicates with the second device is attempting to establish connectivity, as featured in Claim 1.

For example, in paragraph [0020], LUND describes that a DSL customer premise equipment (CPE) device may detect configuration information that may be used to configure a permanent virtual circuit (PVC) between the CPE device and a DSL access module (DSLAM) in a provider network. Significantly, however, the DSLAM in LUND is not operable to provide connectivity to any remote device that provides configuration information for configuring the first device; rather, it is the DSLAM module **itself** that provides the CPE with information for

configuring a PVC between the CPE and the DSLAM. Further, ARNDT and GERBA do not describe or suggest sending requests for IP addresses to, or receiving IP addresses from, any **devices that terminate virtual circuits**. In fact, ARNDT and GERBA do not even describe the operation of devices that terminate virtual circuits.

In contrast, Claim 1 comprises the features of:

> **wherein the second device terminating the virtual circuit is operable to provide connectivity to the remote device**;
> wherein **the second device terminating the virtual circuit is operable to route messages that are destined to the remote device**, and wherein the **remote device is operable to provide configuration information to configure the first device.**

These features of Claim 1 indicate that a first device (the device that is being configured) is attempting to establish connectivity with a remote device through a second device that terminates a virtual circuit, where the remote device is operable to provide configuration information to configure the first device. As described in the specification, an example would be a customer-premise device, which can only connect over virtual circuits to an ATM or a FrameRelay network and which needs to obtain initial configuration from an IP-enabled configuration server. According to the features of Claim 1, in this example the customer-premise device would be able to connect to the IP-enabled configuration server through a second device (e.g., an aggregator, a router, or a gateway) that terminates a virtual circuit in the ATM or FrameRelay network, where the second device provides connectivity to the IP-enabled configuration server.

For the above reasons, it is quite clear that LUND, ARNDT, and GERBA do not describe or suggest the above features of Claim 1.

2. GERBA does not describe or suggest the feature of Claim 1 of requesting, from a second device terminating the virtual circuit, an IP address of the second device.

The Office Action asserts that GERBA describes the above feature of Claim 1. This assertion is incorrect.

In general, GERBA describes a system for remotely managing content distribution networks that may use point-of-sale audio/visual advertising systems. (See GERBA, at least paragraphs [0003], [0010].) Specifically, client modules at a remote location, e.g. a retail store, initiate a session (i.e., log on) to a central server and download digital content and scheduling files that are predetermined by the operators of the system. (See GERBA, paragraph [0010].) The central server stores instruction data that includes a name corresponding to content data. When the client modules receive the instruction data, the client modules use the instruction data to construct a network structure table corresponding to the network topology and the locations of the content in the content network. (See GERBA, paragraphs [0011]-[0012].) Significantly, however, GERBA does describe the feature of Claim 1 of requesting from a second device terminating the virtual circuit an IP address of the second device, as featured in Claim 1. In fact, GERBA does not even describe the operation of a device terminating a virtual circuit.

In rejecting Claim 1, the reasoning of the Office Action seems to be based on the following two assertions: (1) that in paragraph [0027] GERBA describes a device terminating a virtual circuit in an ATM network; and (2) that routes in the routing tables described in paragraphs [0085]-[0086] of GERBA correspond to virtual circuits in an ATM network. These two assertions are incorrect.

In paragraph [0027], GERBA describes that user devices may connect to a network via DSL lines or ATM lines. Specifically, paragraph [0027] refers to FIG. 1, in which a communication link 16 connects a network 14 with user devices 12. Thus, if anything this paragraph suggests a point-to-point communication link between a user device and a network, where **the communication link** may be a DSL link or an ATM link. The mere mention of an ATM link, however, does not describe or suggest any functionality such as requesting from a second device terminating the virtual circuit an IP address of the second device, as featured in

Claim 1. Further, if anything, a device connecting to an ATM network would suggest that the device is going to request information related to the ATM network (as described, for example, in LUND), and **NOT** an IP address (as featured in Claim 1.)

In paragraphs [0085]-[0086], GERBA describes steps in its Fig. 9A, which depicts a chart of a collaborative ad-hoc network initialization process. (See GERBA, paragraph [0023] and Fig. 9A.) Specifically, paragraphs [0085]-[0086] describe how routing tables can be downloaded by a client during the initialization of the ad-hoc network. (See also GERBA, paragraphs [0072] and [0076].) Contrary to the assertion in the Office Action, however, a route in a routing table as described in GERBA is **NOT** a virtual circuit. Rather, as expressly stated in paragraph [0079] of GERBA, "routing table" is like a traditional UNIX routing table that includes lists of routes and destinations, lists of every node located in the network, and information on how to reach the network nodes.

In contrast, Claim 1 comprises the feature of requesting, from a second device terminating the virtual circuit, an IP address of the second device. Thus, in Claim 1 a device being provisioned **requests** the IP address of another device that terminates a virtual circuit. Since GERBA does not even describe any operation of devices terminating virtual circuits or any devices terminating virtual circuits that have IP addresses, GERBA does not describe or suggest the above feature of Claim 1.

3. GERBA does not describe or suggest the feature of Claim 1 of requesting a list of virtual circuit identifiers from a configuration interface for the virtual circuit network.

The Office Action asserts that GERBA describes the above feature of Claim 1 in paragraphs [0027] and [0085]-[0086]. This assertion is incorrect.

As discussed above, paragraphs [0027] and [0085]-[0086] of GERBA do not describe the operation of devices in virtual circuit network or that a device may request a list of virtual circuit identifiers from a configuration interface for a virtual circuit network. It is respectfully noted that, as discussed above, a route as described in GERBA does not correspond to a virtual circuit. Thus, GERBA does not describe or suggest the feature of Claim 1 of requesting a list of virtual circuit identifiers from a configuration interface for the virtual circuit network.

For the above reasons LUND, ARNDT, and GERBA, whether taken alone or in combination, do not describe or suggest all features of Claim 1. Thus, Claim 1 is patentable under 35 U.S.C. § 103(a) over LUND in view of ARNDT and further in view of GERBA. Reconsideration and withdrawal of the rejection of Claim 1 is respectfully requested.

B. INDEPENDENT CLAIMS 12, 22, AND 30

Claims 12, 22, and 30 were rejected as allegedly unpatentable under 35 U.S.C. § 103(a) over LUND in view of ARNDT and further in view of GERBA.

Claims 12, 22, and 30 include features similar to the features of Claim 1 discussed above, except in the context of an apparatus and a computer-readable medium. For this reason, Claims 12, 22, and 30 are patentable under 35 U.S.C. § 103(a) over LUND in view of ARNDT and further in view of GERBA for at least the reasons given above with respect to Claim 1. Reconsideration and withdrawal of the rejection of Claims 12, 22, and 30 is respectfully requested.

C. DEPENDENT CLAIMS 2-10, 13-21, 23-29, AND 31-39

The Office Action indicates that Claims 8-9, 19-20, 29, and 37-38 are objected to as being dependent on a rejected base claim, but would be allowable if rewritten in independent form to include the features of the base claim and any intervening claims.

Claims 3-4, 7, 14-15, 18, 24-25, 28, 32-33, and 36 were rejected as allegedly unpatentable under 35 U.S.C. § 103(a) over LUND in view of ARNDT and further in view of GERBA. Claims 2, 10, 13, 21, 23, 31, and 39 were rejected as allegedly unpatentable under 35 U.S.C. § 103(a) over LUND in view of ARNDT further in view of GERBA and further in view of Reece et al., WO 1999/041937 ("REECE"). Claims 5, 16, 26, and 34 were rejected as allegedly unpatentable under 35 U.S.C. § 103(a) over LUND in view of ARNDT further in view of GERBA and further in view of Douglas E. Comer, *Computer Networks and Internets*, Prentice Hall 1997 ("COMER"). Claims 6, 17, 27, and 35 were rejected as allegedly unpatentable under 35 U.S.C. § 103(a) over LUND in view of ARNDT further in view of GERBA and further in view of "Using the ARP and Inverse ARP Protocols", *OpenROUTE Networks*, 1998 ("OpenROUTE")

Each of Claims 2-10, 13-21, 23-29, and 31-39 depends from one of independent Claims 1, 12, 22, and 30, and thus includes each and every feature of the independent base claim. Furthermore, in rejecting Claims 2, 5, 6, 10, 13, 16, 17, 21, 23, 26, 27, 31, 34, 35, and 39 the Office Action relies explicitly on LUND, ARNDT, and GERBA, and not on REECE, COMER, or OpenROUTE, to show the features discussed above with respect to Claims 1, 12, 22, and 30. Because LUND, ARNDT, and GERBA do not teach the subject matter of Claims 1, 12, 22, and 30, any combination of LUND, ARNDT, and GERBA with the other three references necessarily fails to teach the complete combination recited in any dependent claim of Claims 1, 12, 22, or 30. Thus, each of Claims 2-10, 13-21, 23-29, and 31-39 is allowable for the reasons given above for Claims 1, 12, 22, and 30.

In addition, each of Claims 2-10, 13-21, 23-29, and 31-39 introduces one or more additional features that independently render it patentable. However, due to the fundamental differences already identified, to expedite the positive resolution of this case a separate

discussion of those features is not included at this time. Therefore, it is respectfully submitted that Claims 2-10, 13-21, 23-29, and 31-39 are allowable for the reasons given above with respect to Claims 1, 12, 22, and 30. Reconsideration and withdrawal of the rejection of Claims 2-10, 13-21, 23-29, and 31-39 is respectfully requested.

II. CONCLUSION

The Applicants believe that all issues raised in the Office Action have been addressed. Further, for the reasons set forth above, the Applicants respectfully submit that allowance of the pending claims is appropriate. Reconsideration of the present application is respectfully requested in light of the amendments and remarks herein.

The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

A petition for extension of time, to the extent necessary to make this reply timely filed, is hereby made. If applicable, a law firms check for the petition for extension of time fee is enclosed herewith. If any applicable fee is missing or insufficient, throughout the pendency of this application, the Commissioner is hereby authorized to charge any applicable fees and to credit any overpayments to our Deposit Account No. 50-1302.

Respectfully submitted,
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